

Work Order ID 52539

September 30, 2009 8:01:18 AM



Page 1

Item ID: D206-667-103

Accept



Setup Start



Revision ID: C

Stop



Item Name: Crosstube Fwd

Start Date: 09/09/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 20/10/2009 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals:

Process Plan: *BP*

Date: *09-9-30*

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D206-667-143

Rev C

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile and create labels as per PPP D206-667-103 CHG004

Saludos

for BG 09/11/04

110

0.00



Packaging

Packaging

Memo

0.00

Packaging

9/11/04

120

0.00



BENDING MACHINE - CROSSTUBES

CNC Bend 2

Memo

0.00

CNC Alpha 160 Bender

Bend tube as per Dwg D206-667-143 using CNC bender program 206B-fw and Folio FT

IX 2 MB 09-10-14

Work Order ID 52539

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Item ID: D206-667-103

Accept



Setup Start



Revision ID: C

Stop



Item Name: Crosstube Fwd

Start Date: 30/09/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 20/10/2009 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 QC Quality Control	QC15- Crosstube Dimensional Check Memo	0.00 27 509/10/14 0.00					7		
140 Crosstubes Crosstubes	Crosstubes Memo 1-Drill holes & ream using drill Jig DT8541 & DT8542 as per Dwg D206-667-143. Drill all (3) top holes. □3-Flip tube and switch drilling Jigs from right to left, left to right. Locate Jigs off existing holes using "T" pins. □4-Drill pilot holes using dr	0.00 0.00						MB 09-10-15	
150 HandFXtube Hand Finishing Crosstubes	Crosstubes Chemical Conversion Memo	0.00 0.00						MB 09-10-15	

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Cust Item ID:

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Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160 QC Quality Control	QC3- Inspect Part Finish Memo	0.00 27 5 07/10/20 0.00				(41)	4		
170 QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 27 8 09/10/20 0.00				(41)	4		
180 Outsource2 Outsource process - NDT	Outsource process - NDT per QSI038 4.1 Memo CROSSTUBES	0.00 0.00							

POH 10655 CZ.
09-10-28
X1

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Cust Item ID:

Required Date: 20/10/2009 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190		0.00							
	Packaging								
Packaging	Memo	0.00							
Packaging	Ensure copy of NDT results attached to work order.								
200		0.00							
	QC5- Inspect part completeness to step on W/O								
QC	Memo	0.00							
Quality Control									
210		0.00							
	SprayPaint								
SprayPaint	Memo	0.00							
Spray Painting	1-Prime inside and outside crosstube as per QSI 005 4.2 2-Paint outside crosstube with White Imron as per QSI 005 4.2								
	Time: 9:30 □ Finish Time: 10:00 □ PAINT: □ Start								
	Time: 2:30 □ Finish Time: 3:30								

19/1/29 0

ml 08 10 29 0

ml 09 11 02 0

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Cust Item ID:

Required Date: 20/10/2009 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	----------------	--------------	--------------	---------------	---------------	------------------	----------------

220 QC14- Inspect Spray Paint

0.00



QC

Memo

0.00

Quality Control

Wrap in plastic bag to protect from scratches

09-11-03

230

0.00



Crosstubes

Crosstubes

Memo

0.00

Crosstubes

Rubber Cushion
D3595-003-395
B# 44667

1-Install support using 0.03" to 0.06" thick layer of magnobond 6398 per QSI 015. Let cure for 12h after installation and prior to packaging. Note (2) All holes should be facing up. A/R Magnobond 6398 : 112417 exp: 01/2011
Install supports and clamps as

09-11-04

09 11 03

240

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

2/5 01/11/04

09-11-04

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Item ID: D206-667-103

Accept



Setup Start



Revision ID: C

Stop



Item Name: Crosstube Fwd

Start Date: 30/09/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 20/10/2009 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
250 	Pick Kit	0.00							
Packaging	Memo	0.00							
Packaging									
260 	QC4- 100% Inspect kits for completeness	0.00							
QC	Memo	0.00							
Quality Control									
270 	Packaging	0.00							
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPP D206-667-103								
	Location: _____								
	Rev: _____								

9/10/09

27 Sordulos

9/10/09

9/10/09

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Item ID: D206-667-103

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Revision ID: C

Stop



Item Name: Crosstube Fwd

Start Date: 30/09/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 20/10/2009 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

280

QC21 - Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

09/11/05

Pl 09-11-5

Picklist Print

September 30, 2009 8:01:18 AM

Page 1

Work Order ID: 52539

Parent Item: D206-667-103RevC

Parent Item Name: Crosstube Fwd

Start Date: 30/09/2009

Required Date: 20/10/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Dest Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	--------------------------	---------------	----------------	--------

AN970-4

Purchased

No

100

Each

89.0000

12.0000

Washer

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

89

104885

3

107242

3

107715

1

108077

2

108377

19

111724

3

112082

8

112794

50

D206-667-
103TRNRevC

Manufactured

No

230

Each

2.0000

1.0000

Crosstube Turning DetailL

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

FG

2

48461

1

48463

1

1112933 9/11/4 SP

B-52622 MB 09-10-14

Picklist Print

September 30, 2009 8:01:18 AM

Work Order ID: 52539

Parent Item: D206-667-103RevC

Parent Item Name: Crosstube Fwd

Comments:

Start Date: 30/09/2009

Required Date: 20/10/2009

Start Qty: 1.00

Required Qty: 1.00

Component Item ID Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
--------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	--------------------------	---------------	----------------	--------

D2873-043RevA Manufactured No



Nut Plate Assembly

230 Each 53.0000 2.0000



Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST

53

45370

18

45422

15

50002

20

ml 09.11.03

D2873-045RevA Manufactured No



Nut Plate Assembly

230 Each 71.0000 2.0000



Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST

71

45210

11

46772

20

50001

40

ml 09.11.03

Picklist Print

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Work Order ID: 52539

Parent Item: D206-667-103RevC

Parent Item Name: Crosstube Fwd

Start Date: 30/09/2009

Required Date: 20/10/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D2891-1RevA1		Manufactured	No			230	Each	81.0000	2.0000			

2.25 Support

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
ST	81	
40336	1	
<u>41198</u>	16	
43880	20	
45935	4	
46159	20	
50952	20	

ml 09 01 03

MS21920-20

Purchased

No

230

Each

167.3000

4.0000



Clamp (per MIL-DTL-8783C)

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
ST	167.3	
103478	2	
106484	12	
109269	9.3	
110536	10	
<u>111281</u>	34	
112307	50	
112624	39	
112793	11	

ml 09 11 03

Picklist Print

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Work Order ID: 52539

Parent Item: D206-667-103RevC

Parent Item Name: Crosstube Fwd


Start Date: 30/09/2009

Required Date: 20/10/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
AN5-30A  BOLT		Purchased	No			260	Each	85.0000	4.0000		9/11/4 SP	

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
ST	85	
110467	85	

AN5-32A



Bolt

Purchased

No

260

Each

79.0000

4.0000

4x SP

9/11/4 SP

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
ST	79	
106242	3	
106519	4	
110363	17	
111916	5	
112082	50	

4x SP

September 30, 2009 8:01:18 AM

Shop Packet Print

Page 4

Picklist Print

Page 5

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Work Order ID: 52539



Parent Item: D206-667-103RevC



Parent Item Name: Crosstube Fwd


Start Date: 30/09/2009

Required Date: 20/10/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
AN5-7A  Bolt		Purchased	No			260	Each	81.0000	10.0000			



9/11/4

SD
10

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

81

110625

7

111668

24

112612

50

10x50

Picklist Print

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Work Order ID: 52539



Parent Item: D206-667-103RevC



Parent Item Name: Crosstube Fwd


Start Date: 30/09/2009

Required Date: 20/10/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
AN960JD516  Washer		Purchased	No			260	Each	1,422.000	18.0000			

9/16/4
SIL
116

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
ST	1422	
100564	2	
106167	6	
107534	34	
107959	43	
108246	46	
108672	2	
109059	49	
109752	22	
110363	46	
110523	57	
111279	44	
112082	71	
112314	500	
<u>112794</u>	500	

18X50

Picklist Print

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September 30, 2009 8:01:18 AM

Work Order ID: 52539

Parent Item: D206-667-103RevC

Parent Item Name: Crosstube Fwd


Comments:

Start Date: 30/09/2009

Required Date: 20/10/2009

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
MS20601-AD4W8  RIVET		Purchased	No			260	Each	328.0000	14.0000			

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
ST	328	
108521	100	
110399	28	
112203	200	

mt 09 11 03

MS21042L5  Nut		Purchased	No			260	Each	1,214.0000	4.0000			
---	--	-----------	----	--	--	-----	------	------------	--------	--	--	--

9/11/04 SP

Ⓟ

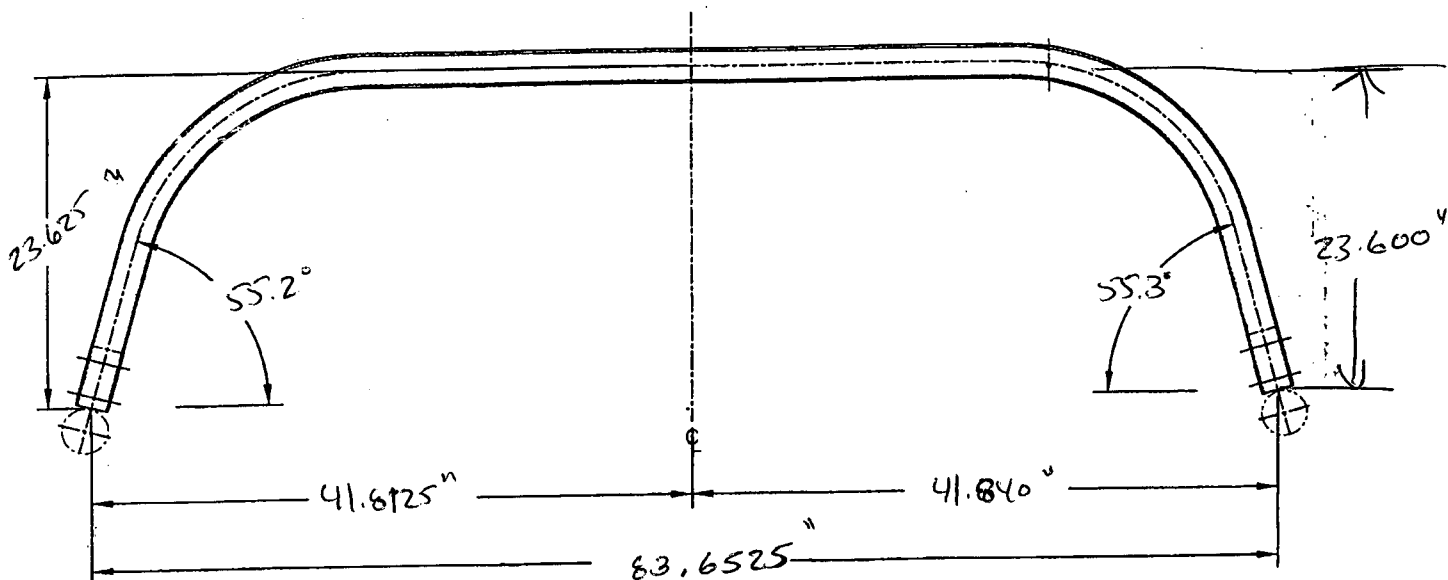
<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
ST	1214	
110382	10	
111127	4	
111636	200	
112314	1000	

4x SP

DART AEROSPACE LTD		Work Order:	52539
Description: Crosstube High Fwd (206L)		Part Number:	D206-667-103
Inspection Dwg: D206-667-143 Rev: C		Page 1 of 1	

23.39 069.10.05

Required Dimension	Min	Max
Height	30.00	23.65
1/2 Span	41.79	42.05
Angle	54	56
Total Span	83.58	84.10



Comments
Tube is slightly lower on one side but only 0.025" well within tol.

QC15 Inspection	S
Date	09/10/14

Rev	Date	Change	Revised by	Approved
A	07.02.06	New Issue	KJ/JM	
B	09.06.26	Dimensions updated per Dwg Rev C	KJ	

Item	Qty -143	Part Number	Description
1	X	D206-667-143	CROSSTUBE ASSEMBLY (206L HIGH FWD)
2	1	D6002-115	CROSSTUBE
3	2	D2873-043	NUT PLATE
4	2	D2873-045	NUT PLATE
5	2	D2891-1	SUPPORT
6	4	D3595-063-395	RUBBER CUSHION
7	4	MS21920-20	CLAMP (OR MS21920-21)
8	14	MS20601AD4W8	RIVET (OR NAS9302B-4-8)
9	A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299-947-100, TYPE II, CLASS 2 ADHESIVE)

GENERAL NOTES:

- 1) MATERIAL: MANUFACTURED FROM D6002-115
FINISHED LENGTH = 104.98±0.020
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
PAINT OUTSIDE PER DART QSI 005 4.2
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- 6) IDENTIFICATION: SCRIBE DART PART NUMBER "D206-667-143" AND BATCH NUMBER ON INSIDE OF CUFF USING VIBRATING STYLUS.
- 7) WEIGHT: 15.5 lbs
- 8) PART IS SYMMETRIC ABOUT CENTERLINE.
- 9) RUN CUTTER OFF PART WHERE INDICATED. BLEND OUT EDGE LONGITUDINALLY. TRANSITION SHOULD BE SMOOTH.
- 10) BEND PROGRESSIVELY WITH A MINIMUM OF 10 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- 11) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- 12) INSTALL D2891-1 SUPPORT USING 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 PER QSI 015. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.
- 13) INSTALL MS21920-20 CLAMPS (OR -21) WITH D3595-063-395 RUBBER CUSHIONS TO SECURE THE D2891-1 SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMP MECHANISMS ARE LOCATED ON CROSSTUBE SUPPORTS.
- 14) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS ARE SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.

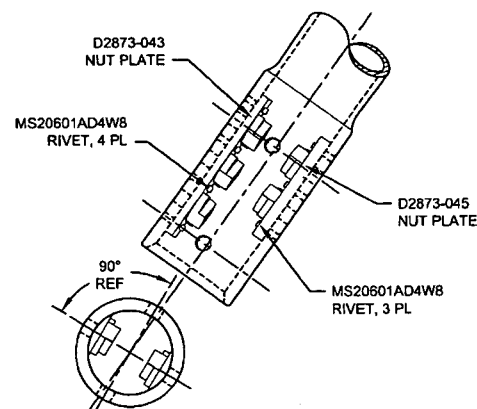
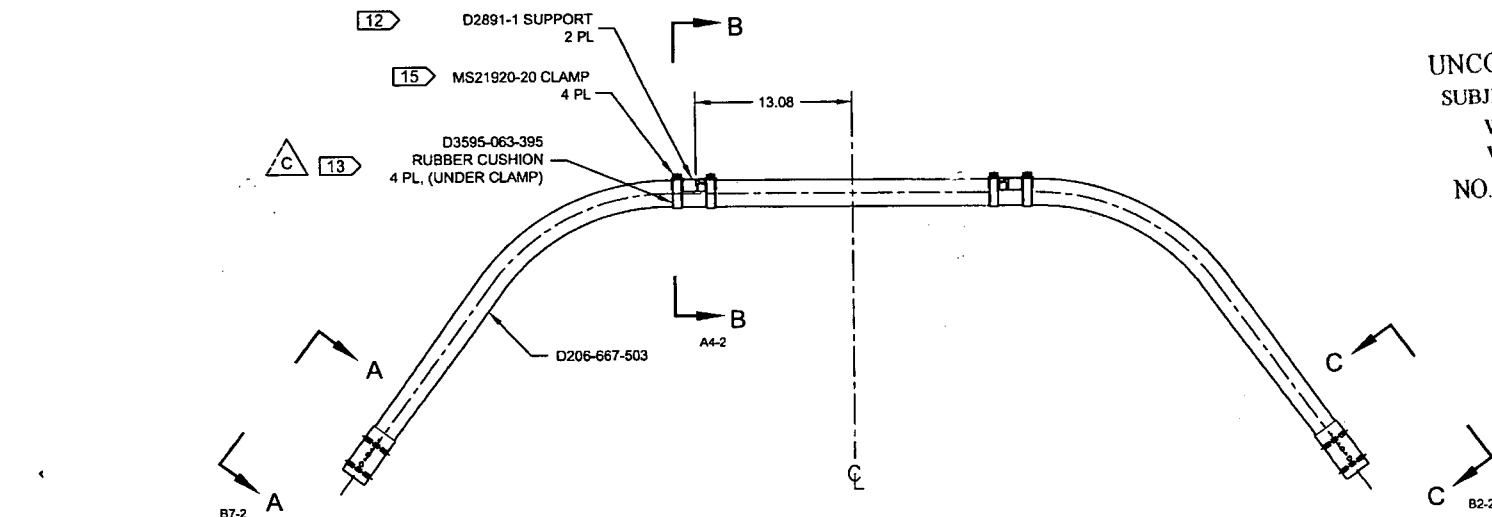
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NO. 52539
09-9-30

RELEASED
08/11/17

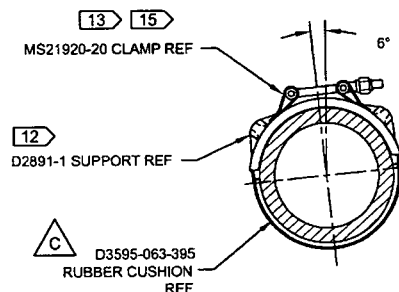
C	REVISE GENERAL NOTES/PART LIST (ZN D7-1); REORGANIZED VIEWS AND REFORMATTED DRAWING TO CURRENT STANDARDS. D3595-063-395 WAS D2856-400-694 (ZN D6-2 & A5-2); REMOVED REF. & ADD TOLERANCE (ZN D3-3, C4-3, C5-3); RELOCATED FLAG #6 (ZN A8-3) PER NCR 210; MOVED TURNING DETAIL & UPDATED TOLERANCE TO SHEET 4.	RF	08.11.06
B	ADD HOLES AND NUT PLATES FOR COMPATABILITY WITH BHT/AA SKUDTUBES	PH	05.07.26
A	NEW ISSUE	CP	00.11.17
REV.	DESCRIPTION	BY	DATE
DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF	DRAWING NO.	REV. C
CHECKED	RF	D206-667-143	SHEET 1 OF 4
MFG. APPR.	RF	TITLE	SCALE
APPROVED	RF	CROSSTUBE ASS'Y (206L HIGH FWD)	NTS
DE APPR.	RF	COPYRIGHT © 2000 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	
DATE	08.11.06		

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WORK ORDER
NO. 52539

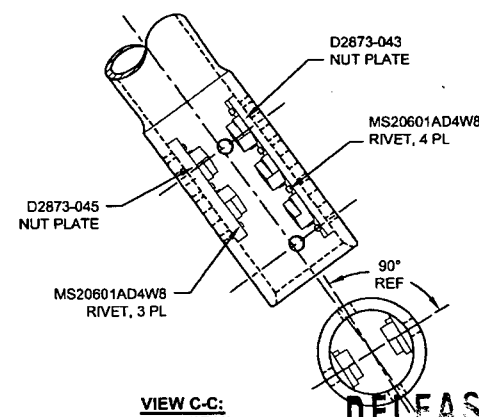


VIEW A-A:
CUFF DETAIL
SCALE 4X

D206-667-143
ASSEMBLY DETAIL
(VIEW LOOKING FWD)



SECTION B-B
SCALE 5X



VIEW C-C:
CUFF DETAIL
SCALE 4X

RELEASED
08/11/12

DESIGN	4	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	4	DRAWING NO.	REV. C
MFG. APPR.	4	D206-667-143	SHEET 2 OF 4
APPROVED	4	TITLE	SCALE
DE APPR.	4	CROSSTUBE ASS'Y (206L HIGH FWD)	NTS
DATE	08.11.06	COPYRIGHT © 2005 BY DART AEROSPACE LTD	
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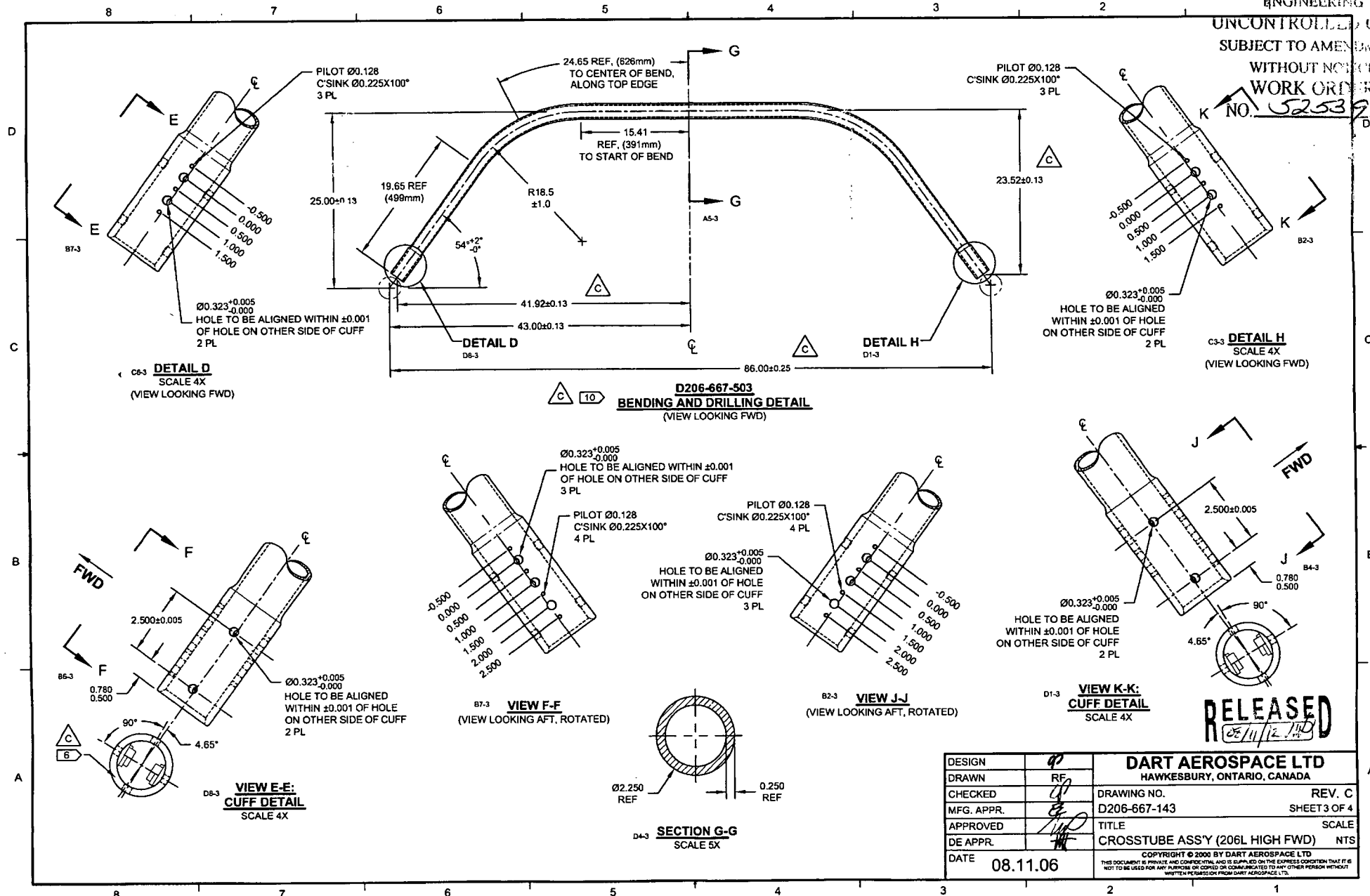
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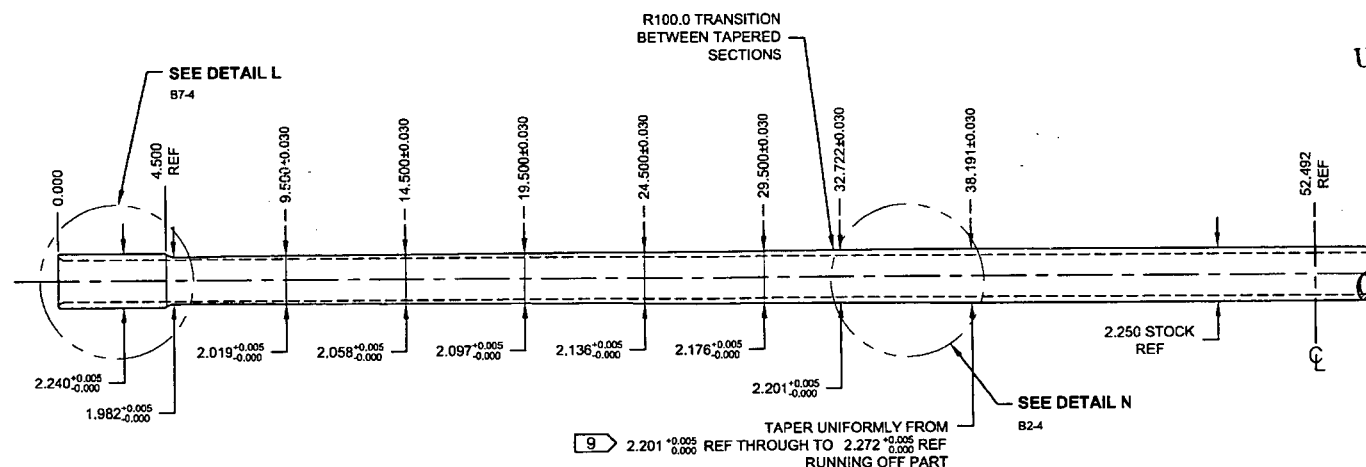
SUBJECT TO AMENDMENT

WITHOUT NOTICE
WORK ORDER

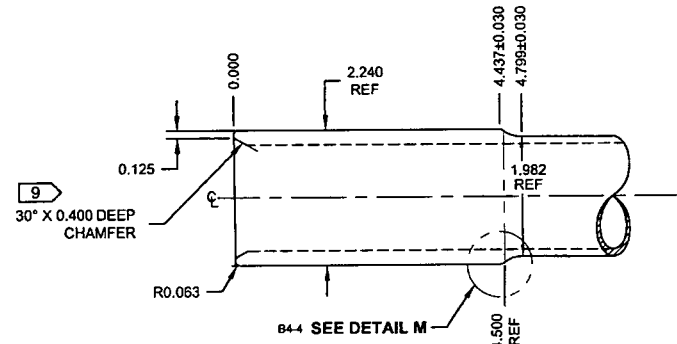
NO. 52539



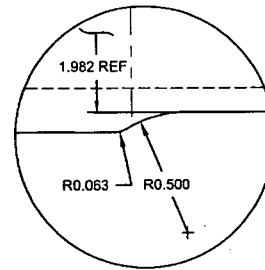
RETURN TO
ENGINEERING
UNCONTROLLED CO
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 52539



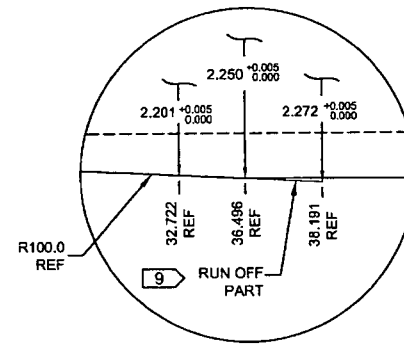
TURNING DETAIL



**DETAIL L:
CROSSTUBE CUFF**
D7-4 NOT TO SCALE



**DETAIL M:
CUFF TRANSITION**
A6-4 NOT TO SCALE



**DETAIL N:
TAPER RUN-OFF**
C4-4 NOT TO SCALE

RELEASED

DESIGN	90	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	JP	DRAWING NO.	REV. C
MFG. APPR.	JP	D206-667-143	SHEET 4 OF 4
APPROVED	JP	TITLE	SCALE
DE APPR.	JP	CROSSTUBE ASSY (206L HIGH FWD)	NTS
DATE	08.11.06	<small>COPYRIGHT © 2000 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED BY ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

REFERENCE ONLY

5.0 PARTS LIST

Item	Qty -011	Qty -013	Qty -015	Qty -101	Qty -201	Qty -103	Qty -203	Qty -105	Qty -205	Part Number	Description
	X									D206-667-011	SPACER BLOCK KIT
		X								D206-667-013	NUT PLATE KIT (-101/-103/-105/-203/-205)
			X							D206-667-015	NUT PLATE KIT (-201)
				X						D206-667-101	CROSSTUBE INSTALLATION, 206A/B HIGH FWD
					X					D206-667-201	CROSSTUBE INSTALLATION, 206A/B HIGH AFT
						X				D206-667-103	CROSSTUBE INSTALLATION, 206L/L-1/L-3/L-4 HIGH FWD
							X			D206-667-203	CROSSTUBE INSTALLATION, 206L/L-1/L-3/L-4 HIGH AFT
								X		D407-667-105	CROSSTUBE INSTALLATION, 407 HIGH FWD
									X	D407-667-205	CROSSTUBE INSTALLATION, 407 HIGH AFT
1				1						D206-667-141	CROSSTUBE ASSEMBLY, 206A/B HIGH FWD
2					1					D206-667-241	CROSSTUBE ASSEMBLY, 206A/B HIGH AFT
3						1				D206-667-143	CROSSTUBE ASSEMBLY, 206L/L-1/L-3/L-4 HIGH FWD
4							1			D206-667-243	CROSSTUBE ASSEMBLY, 206L/L-1/L-3/L-4 HIGH AFT
5								1		D407-667-145	CROSSTUBE ASSEMBLY, 407 HIGH FWD
6									1	D407-667-245	CROSSTUBE ASSEMBLY, 407 HIGH AFT
10				*2	*2	*2		*2		D2891-1	SUPPORT
11							*2			D2892-1	SUPPORT
12									*1	D2894-1	SUPPORT
13				*2	*2	*2		*2		D2856-400-694	ABRASION STRIP
14							*2		*2	D2856-400-773	ABRASION STRIP
15									*1	D2856-600-851	ABRASION STRIP
16				*4	*4	*4		*4		MS21920-20	CLAMP
17							*4		*4	MS21920-22	CLAMP
18									*2	MS21920-24	CLAMP
19				4	4	4		4		AN5-32A	BOLT
20							4		4	AN5-34A	BOLT
21				4	4	4	4	4	4	MS21042L5	NUT (OR MS21042-5)
22				8	8	8	8	8	8	AN960JD516	WASHER
23									*2	D3190-1	CHAFING SHIELD
30	8									AN4-6A	BOLT
31	8									AN4-7A	BOLT
32	16									AN960JD416	WASHER
33	2									D3193-041	SPACER BLOCK ASSEMBLY
40		2		*2		*2	*2	*2	*2	D2873-043	NUT PLATE
41		2		*2		*2	*2	*2	*2	D2873-045	NUT PLATE
42			2		2					D2872-043	NUT PLATE
43			2		2					D2872-045	NUT PLATE
44		10		10		10				AN5-7A	BOLT
45		10	10		10		10	10	10	AN5-10A	BOLT
46		4	4	4	10	4		4		AN5-30A	BOLT
47		4					4		4	AN5-32A	BOLT
48		18	18	10	12	10	10	10	10	AN960JD516	WASHER
49		4	4		6					MS21042L5	NUT (OR MS21042-5)

*REFERENCE ONLY. PARTS ARE INCLUDED IN D206-667-141/241/143/243, & D407-667-145/245 ASSEMBLIES ABOVE

52539

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Revision: C

Date: 05.07.26

REFERENCE ONLY

DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS IIN-D206-667 REV. C
AND INSTRUCTIONS FOR CONTINUED AIRWORTHINESS ICA-D206-667 REV. 2

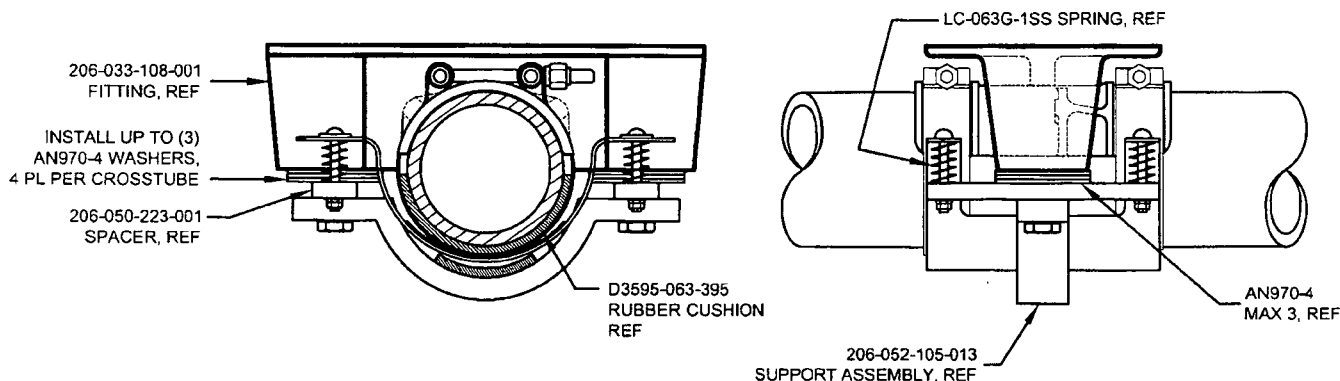
REF CANADIAN STC: SH01-5
REF FAA STC: SR01304NY
REF EASA STC: EASA.IM.R.S.01179

PROBLEM:

FOR D206-667-103 CROSSTUBES (206L FWD) AT CHG 003 AND SUBSEQUENT (SEE DSI 9415) PROPER INSTALLATION OF THE OEM SUPPORT ASSEMBLIES MAY BE IMPOSSIBLE DUE TO THE ADDITIONAL THICKNESS OF THE DART D3595-063-395 RUBBER CUSHIONS. THE 206-052-105-013 SUPPORT ASSEMBLY (OR EQUIVALENT) MAY SIT TOO HIGH RELATIVE TO THE 206-033-108-001 FITTING, CAUSING THE LC-063G-1SS SPRING (OR EQUIVALENT) TO BE OVERLY COMPRESSED.

SOLUTION:

IT IS ACCEPTABLE TO LOWER THE SUPPORT ASSEMBLY BY INSTALLING UP TO QTY (3) AN970-4 WASHERS BETWEEN THE 206-033-108-001 FITTING (OR EQUIVALENT) AND THE 206-050-223-001 SPACER (OR EQUIVALENT). SEE FIGURE BELOW FOR REFERENCE.



CROSSTUBE SECTION: SUPPORT DETAIL

PARTS LIST:

THE FOLLOWING PARTS HAVE BEEN INCLUDED WITH D206-667-103 CROSSTUBES AT CHG 004 AND SUBSEQUENT

ITEM	Qty -103	PART NUMBER	DESCRIPTION
60	12	AN970-4	WASHER

52539

CANADA
DEPARTMENT OF TRANSPORT
AIRCRAFT CERTIFICATION
BRANCH
DAO # 01-O-01

APPROVED
BY: *[Signature]*
D. SHEPHERD (DE # 02)

DATE: 08.12.17
CERT. NO.: SH01-5
ISSUE NO.: 3

A	NEW ISSUE	CP	08.12.17
REV.	DESCRIPTION	BY	DATE
DESIGN	<i>q</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	<i>q</i>		
CHECKED	<i>PH</i>	DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9439	SHEET 1 OF 1
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	206L FWD XTUBE SUPPORT MOD.	NTS
DATE	08.12.17	COPYRIGHT © 2008 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	



LIQUID PENETRANT TEST REPORT

P. 15030

PAGE 1 OF 1

ION Dart Aerospace DATE oct 28th 09 TIME AM ☐ PM ☐
SS Linda Lacelle ACUREN JOB NO. 188-09-1626
1270 Aberdeen St. POWO No. 10655
Hawkesbury WORK LOCATION Hawkesbury
ACCEPTANCE STD. ASTM 1417/Q31-03 REV./DATE 2005
T X-Tubes D212-664-201, D212-664-107, D212-664-101 - D206-667-103
EXAMINED Sob #'s 51068, 51069, 52218, 52454, 52455, 52456, 52539, 52540

DESCRIPTION PROCEDURE No. LT-000 REV./DATE 07 TECHNIQUE No. LT-TEC# 07 REV./DATE 07
O. D212-664-201, D212-664-107, D212-664-101 MATERIAL ALODINED ALUM. THICKNESS 0.006-0.007-0.008
WET FLOUORESCENT LIQUID PENETRANT INSPECTION CARRIED OUT
ON 100% EXTERNAL SURFACE

DETAILS
D ☒ FLUORESCENT ☐ VISIBLE ☒ WATER WASH ☐ SOLVENT REMOVABLE ☐ POST EMULSIFIED
BRAND MAGNAFLUX BLACK LIGHT S/N 8178 ☒ OUTPUT > 1000 μ W/cm² ☐ AMBIENT < 2 fc
TANT ZL67 MINIMUM DWELL TIME 45 MIN. LIGHTING EQUIP. ☒ FLASHLIGHT ☐ TROUBLELIGHT ☐ OUTPUT > 100 fc @ SURFACE
TANT REMOVER H2O MINIMUM DRY TIME >10 MIN. OTHER CAL SUNCOR
OPER SKDS2 MINIMUM DWELL TIME 10 MIN. LIGHT METER S/N CAL DUE DATE DEC 09
OPER TYPE ☒ NON AQUEOUS ☐ AQUEOUS ☐ DRY

SURFACE
E CONDITION ☐ AS GROUND ☐ AS WELDED ☒ MACHINED ☐ SHOT BLASTED ☒ CLEAN BARE METAL
E TEMPERATURE ☐ < -4°C/ 20°F ☐ -4°C/ 20°F TO 10°C/50°F ☒ 10°C/50°F TO 52°C/125°F ☐ > 52°C/125°F

TS- ☐ METRIC ☐ IMPERIAL

WET FLOUORESCENT LIQUID
PENETRANT INSPECTION
CARRIED OUT ON 100%
EXTERNAL SURFACE ON X-TUBES
52540: ACCEPTABLE
Sob #'s 51068: ACCEPTABLE
51069: ACCEPTABLE
52218: ACCEPTABLE
52454: ACCEPTABLE
52455: ACCEPTABLE
52456: ACCEPTABLE
52539: ACCEPTABLE

M 08 10 29

services
ment of Acuren Group Inc. to perform services extends only to those services provided for in writing. Under no circumstances shall such services extend beyond the performance of the requested services. It is expressly understood
criptions, comments and expressions of opinion reflect the opinions or observations of Acuren Group Inc. based on information and assumptions supplied by the owner/operator and are not intended nor can they be construed as
ions or warranties. Acuren Group Inc. is not assuming any responsibilities of the owner/operator and the owner/operator retains complete responsibility for the engineering, manufacture, repair and use decisions as a result of the
er information provided by Acuren Group Inc. In no event shall Acuren Group Inc.'s liability in respect of the services referred to herein exceed the amount paid for such services.
of Care
ing the services provided, Acuren Group Inc. uses the degree, care and skill ordinarily exercised under similar circumstances by others performing such services in the same or similar locality. No other warranty, expressed or
made or intended by Acuren Group Inc.

TURES
REPRESENTATIVE Chantal Lavoie Frederick Chagnon DTR# E-27155
ICIAN (SIGNATURE): SIGNATURE REPORT
(PRINT): FREDERICK CHAGNON REVIEWED BY: NAME INITIALS
1st TECHNICIAN 2nd TECHNICIAN
CGSB LEVEL II SNT LEVEL II CGSB LEVEL SNT LEVEL
CGSB REG. No 10560 CGSB REG. No

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PT Sept 2005